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Merchant & Gould - Cox PO Box 2903 Minneapolis, MN 55402			EXAMINER PARRA, OMAR S	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

09/734,496

**Applicant(s)**

FEINBERG ET AL.

**Examiner**

OMAR S. PARRA

**Art Unit**

2421

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 5) ☒ Claim(s) 37-47 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 37-47 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/01/2010 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 37-47 have been considered but are moot in view of the new ground(s) of rejection.

Although a new grounds of rejections is presented, the examiner will address some of applicant's arguments corresponding to the limitations for which the references are kept on the rejection.

*"Jahn (as well as Terreault, page 12) does not disclose, teach or suggest providing a service manager at the head-end for monitoring parameters associated with transport streams for delivering the programming guide and contents to the remote set top terminals. Jahn also does not disclose, teach or suggest providing a session manager at the head-end for communicating with the set top terminals to control sessions with the set top terminals and manage usage and demands of the set top terminals",* Remarks, page 9. To this matter, the examiner respectfully disagrees.

Jahn was presented to teach a system that automatically reports faults in a network (at least, title, abstract; col. 3 lines 4-30). Jahn teaches that the monitoring

server remotely monitors different devices that connect to different computers on the network (210, Fig. 1; col. 3 lines 10-30). In particular, Jahn teaches that the monitoring devices analyze and decide if a fault should be reported. A report and a recommended solution is generated and sent to multiple devices of personnel that could repair the fault (col. 4 line 51-col. 5 line 23; col. 6 lines 4-23 and lines 47-64). The report can be sent directly from the report generation entity or from a centralized console (col. 6 lines 54-64). The system uses a predetermined distribution list containing the different devices which could be pagers, email capable, control consoles, etc. From the list, the system is able to recognize which type of device it is, and format the message based on the designated type of the communication device for which it is intended (col. 4 line 51-col. 5 line 23; col. 6 lines 4-23 and lines 47-64).

It is Smyth who teaches the newly added limitations of having a server manager at the headend for monitoring parameters associated with transport streams for delivering content and program guide and the new limitation of having *providing* a session manager at the head-end for communicating with the set top terminals to control sessions with the set top terminals and manage usage and demands of the set top terminals, as presented and explained below on the action.

*"Jahn also fails to disclose, teach or suggest storing an identity, a type, a capability and a reporting level for a plurality of remote devices designated for responding to monitoring and control messages relating to the operation of the head-end from the monitoring and control device. Jahn merely discloses that a predetermined distribution list is provided", Remarks, page 10.*

Jahn teaches a system that uses a predetermined distribution list containing the different devices which could be pagers, email capable, control consoles, etc. From the

list, the system is able to recognize which type of device it is, and format the message based on the designated type of the communication device for which it is intended (col. 4 line 51 -col. 5 line 23; col. 6 lines 4-23 and lines 47-64). It is evident that if a device is capable to receive an email and that some other one is a pager, then their capabilities are known. It is also evident that if the distribution lists used by the computer system for reporting an alarm, they were input and stored on the computer.

Jahn additionally teaches that the list is able to recognize the reporting levels, since it knows to who send the report while omitting others, depending on the problem (col. 6 lines 48-64, especially the end of paragraph).

*“Smyth fails to disclose, teach or suggest providing a service manager at the head-end for monitoring parameters associated with transport streams for delivering the programming guide and contents to the remote set top terminals”, Remarks, page 14. To this matter, the examiner respectfully disagrees.*

Smyth teaches a system that monitors the performance of the devices on a television headend equipment, having a service manager at the headend for monitoring parameters associated with transport streams for delivering content to the remote set top terminals (all the devices at the headend have a self-test and monitoring capabilities for fault detection and report the fault to the Session Control Manager 200, [0055]. Additionally, TPM 110, Transport Processing Module Fig. 1, detects and reports failures on the media transport to the Session Control Manager 200, as well, [0041]). Therefore, Smyth teaches having modules (TPM) or embedded functionalities on each of the devices of the headend that monitor the transport and their functionalities, in order to report to a device, Session Control Manager 200, for resolution.

*Smyth also does not disclose, teach or suggest providing a session manager at the head-end for communicating with the set top terminals to control sessions with the set top terminals and manage usage and demands of the set top terminals. Smyth still further fails to disclose, teach or suggest providing a monitoring and control device remotely coupled to the head-end for receiving status from the service manager for parameters associated with transport streams for delivering the programming guide and contents to the remote set top terminals and for receiving status from the session manager for usage and demands of the set top terminals demands", Remarks, page 14. To this matter, the examiner respectfully disagrees.*

Smyth clearly teaches having a computing device (Session Control Manager 200, [0032]), which communicates with the settop terminals for session control and for managing usage and demands of the terminals, ([0034]; [0047]; [0050]; [0052]). Among the Session Control Manager 200, we have receiving status from the service manager for parameters associated with transport streams for delivering the programming guide and contents to the remote set top terminals (the same Session Manager receives reports from all the headend devices and the TPM, [0041]; [0055]) and receiving status from the session manager for usage and demands of the set top terminals demands ([0050]; [0055]).

*"Smyth only discloses a session control manager having a defective channel detection module, a channel re-allocation module, and a replacement-signaling module" Remarks, page 14. To this matter, the examiner respectfully disagrees.*

Smyth clearly teaches that the Session Control Manager contains the following modules: an operating system 302, a configuration database 306, session structures 308, a defective channel module 312, a channel re-allocation module 314, a replacement signaling module 316, a hardware fault detection module 318, and a DVM interface 320, and one or more application program(s). The hardware fault detection

module receives monitoring signals from all the headend devices ([0055]), the defective channel monitors the DVMS and messages received from the settop box terminals ([0050]; [0051]) and in any case, the Session Manager processes this data and when a failure is determined, a remedy action is performed, [0051]-[0055]).

Therefore, the examiner respectfully believes that the art of record covers applicant's invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **37-41** are rejected under 35 U.S.C. 103(a) as being unpatentable over Smyth et al. (hereinafter 'Smyth', Pub. No. 2002/0007492) in view of Terreault (Patent No. 7,254,827) in view of Jahn et al. (hereinafter 'Jahn', Patent No. 7,111,205) in further view of Rodriguez (Pub. No. 2008/0101460).

Regarding claim 37, Smyth teaches a method for monitoring, from a remote location comprising a monitor and control unit, operations of a head-end in an information distribution system, the method comprising:

providing a head-end for delivering contents to remote set top terminals coupled to display devices for viewing the programming guide and contents **(in conjunction 108, 112 and 114, Fig. 1, [0018]; [0019]; [0021], which are used to send video to users);**

providing a service manager at the head-end for monitoring parameters associated with transport streams for delivering the contents to the remote set top terminals **(all the devices have self-test and monitoring capabilities for fault detection and report the fault to the Session Control Manager 200, [0055]. Additionally, TPM 110, Fig. 1, detects and reports failures on the media transport to the Session Control Manager 200, as well, [0041]);**

providing a session manager at the head-end for communicating with the set top terminals to control sessions with the set top terminals and manage usage and demands of the set top terminals **(one of the modules from Session Control Manager communicates with the settop terminals for session control and manage usage and demands of the terminals, [0034]; [0047]; [0050]; [0052]);**

providing a monitoring and control device remotely coupled to the head-end for receiving status from the service manager for parameters associated with transport streams for delivering the contents to the remote set top terminals **(the same Session Manager receives reports from all the headend devices and the TPM, [0041]; [0055])** and for receiving status from the session manager for usage and demands of the set top terminals demands **([0050]; [0055]);**

processing, at the monitoring and control device, the status received from the service manager and the status received from the session manager to generate a monitoring and control message relating to the operation of the head-end **(the same Session Manager receives reports from all the headend devices and the TPM, [0041]; [0055]; as well from the settop boxes, [0050]; [0055]. The Session Manager processes this data and when a failure is determined, a remedy action is performed, [0051]-[0055]);**

providing a communication server for establishing communication between the plurality of remote devices and the monitoring and control device and for providing the generated monitoring and control message to the identified remote device **(One of the remedy actions of the Session Manager is to contact the network manager 104, Fig. 1, so the network manager 104 contacts/pages the field personnel to troubleshoot the problem, Abstract; [0008]; [0054]).**

On the other hand, although Smyth teaches contacting personnel through a server and via pagers, Smyth does not explicitly teach sending automatic message to on-duty/off-duty personnel on different types of communication formats.

However, in an analogous art, Terreault teaches a system that monitors headend elements and other network devices' parameters (ingress noise levels on the return path) and once an anomaly or malfunction is detected, the system contacts a server that consequently contacts different remote personnel devices on different formats of messages. Terreault monitors the levels of headend elements and if they surpass predetermined threshold levels, alarm messages are sent to remote personnel devices.

Terreault's control computer 23 receives the readings of the operation of the elements and compares them to the predetermined threshold values (which is processing the received information) and if a problem is identified (if they exceed said predetermined values), a message is generated and sent to the remote devices (Abstract; col. 9 lines 6-43; col. 13 lines 17-56). Terreault teaches that on the automatic communication mode, automatic alarm messages are sent via pager or email to on-duty and off-duty staff according to a table or to any diagnostic scenario (col. 13 lines 47-56). In other words, in order for the system to automatically send messages, information about the on-duty and off-duty staff and the remote devices they are using must have been input to the computer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smyth's invention with Terreault's feature of sending automatic message to on-duty/off-duty personnel on different types of communication formats following a table for the benefit of more than one option of contacting the employees in the case a network is not working properly (i.e. paging network is down).

Additionally, although Smyth and Terreault teach using a table or listing to use to communicate with field personnel (Terreault: col. 13 lines 47-56), they do not explicitly teach

storing an identity, a type, a capability and a reporting level for a plurality of remote devices designated for responding to monitoring and control messages relating to the operation of the head-end from the monitoring and control device;

analyzing the generated monitoring and control message and the stored identity, type, capability and reporting level for the plurality of remote devices to identify a remote device designated to receive the generated monitoring and control message and to

determine a type and format for the generated monitoring and control message to be provided to the identified remote device; and that the sent messages to the remote devices are according to the determined type and format.

However, in an analogous art, Jahn teaches a system that automatically reports faults in a network (at least, title, abstract; col. 3 lines 4-30). Jahn teaches that the monitoring server remotely monitors different devices that connect to different computers on the network (210, Fig. 1; col. 3 lines 10-30). Multiple aspects are monitored such as software and hardware failures and/or traffic statistics like overload conditions (col. 5 lines 37-34). Jahn teaches that the monitoring devices analyze and decide if a fault should be reported. A report and a recommended solution is generated and sent to multiple devices of personnel that could repair the fault (col. 4 line 51-col. 5 line 23; col. 6 lines 4-23 and lines 47-64). The report can be sent directly from the report generation entity or from a centralized console (col. 6 lines 54-64). The system uses a predetermined distribution list containing the different devices which could be pagers, email capable, control consoles, etc. From the list, the system is able to recognize which type of device it is, and format the message based on the designated type of the communication device for which it is intended (col. 4 line 51-col. 5 line 23; col. 6 lines 4-23 and lines 47-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Terreault's invention with Jahn's transmission of the report through a server or communication entity and keeping record of a list of devices for formatting the message according to capability of the receiving device for the benefit of reducing the task load of the monitoring device and for being able to send

clear messages (in the proper format) to the devices that are to receive the report messages.

Finally, Smyth, Terreault and Jahn do not explicitly teach that the headend delivers program guide to the remote set top terminals.

However, in an analogous art, Rodriguez teaches a system for distributing video content and program guide that dynamically allocates bandwidth for transmission (at least, Title and Abstract). Rodriguez teaches that the program guide and/or additional data can be sent along with the video content using different modulating formats. The program guide is modulated in the VBI part of the video signal ([0029]). Rodriguez teaches using a set of QAM modulators ([0030]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smyth, Terreault and Jahn's invention with Rodriguez' feature of modulating the program guide on the video signal at the VBI portion of the signal for the benefit of maximizing all the transmission opportunities on the unused portion of the video signal and therefore, reducing transmission congestion.

Regarding claims 38-40, Smyth, Terreault, Jahn and Rodriguez teach further comprising:

receiving at the communication server a response message from the identified remote device; forwarding the response message from the communication server to the monitor and control device; forwarding the response message, received by the monitor and control device from the communication server, to a responsible entity at the head-

end, and adjusting a parameter of an operation performed by an element at the head-end in response to receiving the command via the response message from the identified remote devices (**Terreault: the user can remotely take control of the devices at the headend as a response to the alarms, col. 13 lines 29-50.**

**Following, as stated the flow of communication above -headend communicates to control computer 23, which can control headend devices and communicates with the network manager 103 for a higher level of networking and communication with remote devices- the control signals from the remote device have to follow the same path in opposite direction).**

Regarding claim 41, Smyth, Terreault, Jahn and Rodriguez teach further comprising polling a plurality of head-ends for status relating to the operations of elements of the plurality of head-ends (**Terreault: col. 3 lines 42-53; col. 4 lines 38-54).**

5. Claims **42-47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Smyth et al. (hereinafter 'Smyth', Pub. No. 2002/0007492) in view of Terreault (Patent No. 7,254,827) in view of Jahn et al. (hereinafter 'Jahn', Patent No. 7,111,205) in view of Rodriguez (Pub. No. 2008/0101460) in further view of Pandya et al. (hereinafter 'Pandya', Patent No. 6,671,724).

Regarding claims 42-47, Smyth, Terreault, Jahn and Rodriguez teach all the limitations of the claims they depend on. On the other hand, although Smyth, Terreault, Jahn and Rodriguez teach monitoring status on performance of a headend, they do not explicitly teach monitoring status of other operations performed at the headend related to status for one or more buffers for encoding data, relating to multiplexing, to a particular transport stream and to bit rates for a plurality of data being provided at the headend.

However, in an analogous art, Pandya teaches a method for monitoring from a remote location operations of a headend or server/network resources in a in distribution system (col. 4 lines 40-61). Among the operations monitored by the system: status of one or more buffers used to store encoded data (col. 11 line 24-col. 12 line 29), multiplexing operations (col. 14 line 45-col. 16 line 28), status relating to a particular transport stream (col. 9 line 66-col. 11 line 15) and status related to bit rates of types of data (col. 11 line 36-col. 12 line 29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Smyth, Terreault, Jahn and Rodriguez's invention with Pandya's featuring of monitoring status of the multiple other headend's operations for the benefit of having a more comprehensive and detailed control of the performance of the headends in all their areas.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR S. PARRA whose telephone number is (571)270-1449. The examiner can normally be reached on 9-6 PM (M-F, every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on 571-272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OP

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